How to automatically reboot (restart) Debian GNU Lenny / Squeeze Linux on kernel panic, some general CPU overload or system crash

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If you are a system administrator, you have probably wondered at least once ohw to configure your Linux server to automatically reboot itself if it crashes, is going through a mass CPU overload, e.g. the server **load average** "hits the sky".
I just learned from a nice article found here that there is a kernel variable which when enabled takes care to automatically restart a crashed server with the terrible **Kernel Panic** message we all know.

The variable I'm taking about is **kernel.panic** for instance **kernel.panic = 20** would instruct your GNU Linux kernel to automatically reboot if it experiences a kernel panic system crash within a time limit of 20 seconds.

To start using the auto-reboot linux capabilities on a kernel panic occurance just set the variable to **/etc/sysctl.conf**

```
debian-server:~# echo 'kernel.panic = 20' >> /etc/sysctl.conf
```

Now we will also have to enable the variable to start being use on the system, so execute:

```
debian-server:~# sysctl -p
```

There you go automatic system reboots on kernel panics is now on.
Now to further assure yourself the linux server you're responsible of will automatically restart itself on a emergency situation like a system overload I suggest you check Watchdog

You might consider checking out this auto reboot tutorial which explains in simple words how watchdog is installed and configured.
On Debian installing and maintaining watchdog is really simple and comes to **installing and enabling the watchdog system service, right afteryou made two changes in it's configuration file /etc/watchdog.conf**

To do so execute:

```
debian-server:~# apt-get install watchdog
debian-server:~# echo "file = /var/log/messages" >> /etc/watchdog.conf
debian-server:~# echo "watchdog-device = /dev/watchdog" >> /etc/watchdog.conf
```

Well that should be it, you might also need to load some kernel module to monitor your watchdog.
On my system the kernel modules related to watchdog are located in:

/lib/modules/2.6.26-2-amd64/kernel/drivers/watchdog/
If not then you should certainly try the **software watchdog** linux kernel module called **softdog** , to do so issue:
debian-server:~# /sbin/modprobe softdog

It's best if you load the module while the softdog daemon is disabled.
If you consider auto loadig the softdog software watchdog kernel driver you should exec:

debian-server:~# echo 'softdog' >> /etc/modules

Finally a start of the watchdog is necessery:

debian-server:~# /etc/init.d/watchdog start
Stopping watchdog keepalive daemon....
Starting watchdog daemon....

That should be all your automatic system reboots should be now on! :)